

What is claimed is:

1. A blade driving device for use in cameras, the blade driving device comprising:

5        a mechanical blade openably and closably disposed in front of an image pickup element, the mechanical blade being capable of blocking a part or all of light passing through an exposure aperture or capable of reducing light passing therethrough;  
      an electromagnetic actuator for enabling the blade to  
10 perform an opening motion according to opening energization and enabling the blade to perform a closing motion according to closing energization; and  
      a control means for drive-controlling the electromagnetic actuator and applying opening energization to the  
15 electromagnetic actuator so as to allow the blade to pre-perform an opening motion before performing a closing motion in each photographing operation.

2. The blade driving device for use in cameras as set  
20 forth in Claim 1, wherein

      the control means applies opening energization to the electromagnetic actuator and then applies closing energization thereto when a releasing operation is performed.

25        3. The blade driving device for use in cameras as set forth in Claim 1, wherein

      the blade is a shutter blade that opens and closes the

aperture.

4. The blade driving device for use in cameras as set forth in Claim 1, wherein

5 the blade is a diaphragm blade that stops down the aperture to a predetermined aperture diameter.

5. The blade driving device for use in cameras as set forth in Claim 1, wherein

10 the blade is an ND filter blade that reduces an amount of light passing through the aperture to a predetermined level.

6. A blade driving device for use in cameras, the blade driving device comprising:

15 a mechanical blade openably and closably disposed in front of an image pickup element, the mechanical blade being capable of blocking a part or all of light passing through an exposure aperture or capable of reducing light passing therethrough;  
an electromagnetic actuator for enabling the blade to  
20 perform an opening motion according to opening energization and enabling the blade to perform a closing motion according to closing energization; and

a control means for drive-controlling the electromagnetic actuator and applying opening energization to the  
25 electromagnetic actuator so as to allow the blade to pre-perform an opening motion before performing a closing motion when an amount of light incident on the image pickup element becomes

equal to or less than a predetermined level in a photographic standby state.

7. The blade driving device for use in cameras as set  
5 forth in Claim 6, wherein  
the blade is a shutter blade that opens and closes the aperture.

8. The blade driving device for use in cameras as set  
10 forth in Claim 6, wherein  
the blade is a diaphragm blade that stops down the aperture to a predetermined aperture diameter.

9. The blade driving device for use in cameras as set  
15 forth in Claim 6, wherein  
the blade is an ND filter blade that reduces an amount of light passing through the aperture to a predetermined level.

10. A blade driving device for use in cameras, the blade  
20 driving device comprising:  
a mechanical blade openably and closably disposed in front of an image pickup element, the mechanical blade being capable of blocking a part or all of light passing through an exposure aperture or capable of reducing light passing therethrough;  
25 an electromagnetic actuator for enabling the blade to perform an opening motion according to opening energization and enabling the blade to perform a closing motion according

to closing energization; and

a control means for drive-controlling the electromagnetic actuator and applying opening energization to the electromagnetic actuator so as to allow the blade to pre-perform  
5 an opening motion before performing a closing motion when a signal is output from a shock sensor used to detect an impulsive force in a photographic standby state.

11. The blade driving device for use in cameras as set  
10 forth in Claim 10, wherein  
the blade is a shutter blade that opens and closes the aperture.

12. The blade driving device for use in cameras as set  
15 forth in Claim 10, wherein  
the blade is a diaphragm blade that stops down the aperture to a predetermined aperture diameter.

13. The blade driving device for use in cameras as set  
20 forth in Claim 10, wherein  
the blade is an ND filter blade that reduces an amount of light passing through the aperture to a predetermined level.